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MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004

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FILE 'HOME' ENTERED AT 08:48:28 ON 03 NOV 2004

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FILE 'CAPLUS' ENTERED AT 08:48:38 ON 03 NOV 2004
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FILE COVERS 1907 - 3 Nov 2004 VOL 141 ISS 19
FILE LAST UPDATED: 1 Nov 2004 (20041101/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s (resole resin)
      604 RESOLE
      549355 RESIN
L1      159 (RESOLE RESIN)
          (RESOLE(W)RESIN)

=> s (aldehyde (10w) (phenol or bisphenol))
      98328 ALDEHYDE
      229153 PHENOL
      64998 BISPHENOL
L2      836 (ALDEHYDE (10W) (PHENOL OR BISPHENOL))

=> s l1 and l2
L3      3 L1 AND L2

=> d 13 1-3 ti, ab, bib

L3  ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
TI  Thixotropic compositions based on phenol-aldehyde resole resins for
in-mold coatings for phenolic laminates
AB  Compns. that provide hard, defect-free, coatable surfaces on laminates of
glass fiber-reinforced phenol-aldehyde resins contain an
acid-hardenable phenol-aldehyde resole resin
, highly dispersed hydrophobic amorphous silica, and a viscosity modifier,
with Brookfield spindle-4 viscosity 40-50 and 14-18 P at 5 and 50 rpm,
resp. Optionally, the compns. contain addnl. inorg. filler and exhibit
spindle-7 viscosity 80-200 and 300-600 P at 50 and 5 rpm, resp. Thus, a
compn. (spindle-7 viscosity 440 and 130 P at 5 and 50 rpm) contg. 1.6:1
HCHO-phenol resole resin (I) 100, glass spheres (av.
diam. 15 .mu.m) 110, Aerosil R805 (av. particle diam. 12 nm) 2, and
viscosity modifier 2 parts was mixed with 2.5% Phencat 15 catalyst,
brushed at 0.3-0.4-mm thick on a mold surface, heated 20 min at
60.degree., laid-up with 3 layers of chopped glass strand mat and a layer
of I contg. 6% Phencat 10 catalyst at I-glass ratio 2:1, and cured 3 h at
60.degree. in the mold and 4 h at 60.degree. outside the mold.
AN  1992:257524 CAPLUS
DN  116:257524
TI  Thixotropic compositions based on phenol-aldehyde resole resins for
in-mold coatings for phenolic laminates
IN  Francis, Robert Stradling; Orpin, Murray Roy
PA  BP Chemicals Ltd., UK
SO  Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW
DT  Patent
```

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|----------|
| PI | EP 476829 | A2 | 19920325 | EP 1991-307434 | 19910813 |
| | EP 476829 | A3 | 19921125 | | |
| | EP 476829 | B1 | 19960925 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE | | | | |
| | AT 143399 | E | 19961015 | AT 1991-307434 | 19910813 |
| | ES 2091295 | T3 | 19961101 | ES 1991-307434 | 19910813 |
| | ZA 9106624 | A | 19930428 | ZA 1991-6624 | 19910821 |
| | CA 2049823 | AA | 19920302 | CA 1991-2049823 | 19910826 |
| | JP 04234451 | A2 | 19920824 | JP 1991-218372 | 19910829 |
| | AU 9183506 | A1 | 19920305 | AU 1991-83506 | 19910830 |
| | AU 641542 | B2 | 19930923 | | |
| | US 5334630 | A | 19940802 | US 1991-752730 | 19910830 |
| PRAI | GB 1990-19143 | | 19900901 | | |

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

TI Phenolic resin binders for foundry and refractory uses

AB Alkoxy-modified phenolic resole (I) resins are suitable for binders having good storage properties. I resin contains .gtoreq.1 alkoxyethylene group for each 20 phenolic nuclei joined mainly by ortho-ortho benzylic ether bridges. The resins are prep'd. by reacting phenol, aliph. alc., and an aldehyde (esp. aq. formaldehyde) with heating in the presence of a divalent metal ion catalyst. Preferred mol ratio of **aldehyde** to **phenol** is (1.2-2.2):1. Acid-hardened resin is a suitable binder for foundry molds or ceramic refractory mixts. Thus, charge soln. contg. phenol 3891, aq. 50% formaldehyde 3603, MeOH 639, and aq. 25% Zn acetate 311.4 g was refluxed 3 h to reach free formaldehyde 6-8%. Excess water was removed by heating at 50-90.degree.. After MeOH 639 g was added again, the soln. was refluxed 7 h for 1.2% free formaldehyde. Resulting I resin was mixed with 200 g MeOH and 12 g .gamma.-aminopropyltriethoxy silane. Dried SiO₂ sand 2500 g was mixed at 38.degree. with 10 g acid catalyst (80% benzenesulfonic acid and .apprx.1% H₂SO₄ in MeOH) for 1 min, and then with 27.5 g resin product for 1 min. The sand mixt. held for 1-10 min was pressed into tensile specimens, and showed tensile strength 7.6-34 kg/cm² (decreasing after longer holding time). Conventional **resole resin** lost strength when the mixt. was held for >5 min. The I resin product at 31.degree. could be stored for 1 yr without showing an excessive increase in viscosity.

AN 1986:447382 CAPLUS

DN 105:47382

TI Phenolic resin binders for foundry and refractory uses

IN Iyer, Raja; Shah, Rasik C.; Laitar, Robert

PA Acme Resin Corp., USA

SO Eur. Pat. Appl., 31 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|-------------------------------|------|----------|-----------------|----------|
| PI | EP 179360 | A2 | 19860430 | EP 1985-112854 | 19851010 |
| | EP 179360 | A3 | 19870408 | | |
| | EP 179360 | B1 | 19910102 | | |
| | R: BE, DE, FR, GB, IT, NL, SE | | | | |
| | US 4657950 | A | 19870414 | US 1984-660169 | 19841012 |
| | IN 166174 | A | 19900324 | IN 1985-MA709 | 19850910 |
| | BR 8505018 | A | 19860729 | BR 1985-5018 | 19851009 |
| | CA 1251883 | A1 | 19890328 | CA 1985-492606 | 19851009 |
| | AU 8548483 | A1 | 19860417 | AU 1985-48483 | 19851010 |
| | AU 583305 | B2 | 19890427 | | |
| | JP 61097314 | A2 | 19860515 | JP 1985-225001 | 19851011 |

| | | | | |
|---------------------|----|----------|----------------|----------|
| ES 547786 | A1 | 19870401 | ES 1985-547786 | 19851011 |
| US 4848442 | A | 19890718 | US 1987-106024 | 19871008 |
| PRAI US 1984-660169 | | 19841012 | | |
| US 1985-742688 | | 19850610 | | |
| US 1987-15497 | | 19870206 | | |

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Combustion-resistant phenolic forms
 AB Low-d., multicellular foam structures of thermal set phenol-aldehyde condensates are prep'd. by admixing with the liq. phenol-aldehyde resole of viscosity 200-300,000 cp. at 25.degree. an Al halide contg. chloride or bromide or both in an amt. of .gtoreq.5 parts/100 resole, foaming the resulting mixt., and curing the resole to a stable cured foam. Mixts. of 3 different resins were used, including a NaOH catalyzed phenol-HCHO resole resin of viscosity 600-1000 and contg. 0.8% water, a resole (I) of viscosity 3000 cp. and water content 7.0%, and a resole of viscosity 10,000 cp. and water content 8%. A typical foam was prep'd. from I 100, AlCl₃ 7, surfactant 3, and Ucon 113 (CFC₁₂CF₂Cl) 10 parts. The foam obtained had a d. of 1.97, required 10.2 min. to reach 500.degree.F. at the surface, showed no punking, i.e. continued glowing and combustion after removal of the flame, and had compressive strength 13.1 psi. Catalysts similarly used were AlBr₃, TiCl₄, FeCl₃, AlCl₃.6H₂O, and HCl. Foams were also prep'd. using mixts. of the epoxy resins and resole resins according to the formulation epoxy resin (diglycidyl ether bisphenol A of epoxy equiv. 190 and viscosity 7000-9000 cp.) 7.5, resole resin of 3000 cp. 100, surfactant L-530 3.3, Ucon 113 11, and AlCl₃ 7.5 parts to give a foam of 1.1 lb./ft.³ d., no punking, and requiring 16 min. to reach 500.degree.F.

AN 1968:22580 CAPLUS

DN 68:22580

TI Combustion-resistant phenolic forms

PA Union Carbide Corp.

SO Brit., 12 pp.

CODEN: BRXXAA

DT Patent

LA English

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|-------|----------|-----------------|-------|
| ----- | ----- | ----- | ----- | ----- |
| PI GB 1088056 | | 19671018 | | |
| PRAI US | | 19631010 | | |

=> d hist

(FILE 'HOME' ENTERED AT 08:48:28 ON 03 NOV 2004)

FILE 'CAPLUS' ENTERED AT 08:48:38 ON 03 NOV 2004

L1 159 S (RESOLE RESIN)

L2 836 S (ALDEHYDE (10W) (PHENOL OR BISPHENOL))

L3 3 S L1 AND L2

=> s l2 and resole

604 RESOLE

L4 9 L2 AND RESOLE

=> d 14 1-9 ti, ab, bib

L4 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

TI Bisphenol-containing resin coating particles and methods of using them

AB Proppants comprising a particle coated with a compn. comprising bisphenol-aldehyde novolak resin, a bisphenol homopolymer or mixts. including such polymers are disclosed. Foundry sands comprising a particle coated with a compn. comprising bisphenol-aldehyde

novolak resin, a **bisphenol** homopolymer or mixts. including such polymers are disclosed. Methods of making and using these proppant particles in subterranean formations or making and using these foundry sands in foundries are also disclosed.

AN 1996:728651 CAPLUS
 DN 125:333762
 TI Bisphenol-containing resin coating particles and methods of using them
 IN Johnson, Calvin K.; Tse, Kwok-Tuen
 PA Borden, Inc., USA
 SO Eur. Pat. Appl., 27 pp.
 CODEN: EPXXDW

DT Patent
 LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|------------------|----------|
| PI | EP 735234 | A2 | 19961002 | EP 1996-301260 | 19960226 |
| | EP 735234 | A3 | 19970924 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | | |
| | US 5639806 | A | 19970617 | US 1995-411887 | 19950328 |
| | CA 2164794 | AA | 19960929 | CA 1995-2164794 | 19951208 |
| | AU 9640779 | A1 | 19961010 | AU 1996-40779 | 19960103 |
| | AU 696125 | B2 | 19980903 | | |
| | BR 9600242 | A | 19971223 | BR 1996-242 | 19960126 |
| | TW 432096 | B | 20010501 | TW 1996-85100965 | 19960126 |
| | CN 1143087 | A | 19970219 | CN 1996-102797 | 19960325 |
| | CN 1092209 | B | 20021009 | | |
| | US 5916933 | A | 19990629 | US 1997-810449 | 19970304 |
| | CN 1396189 | A | 20030212 | CN 2002-106692 | 20020305 |
| PRAI | US 1995-411887 | A | 19950328 | | |

L4 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Thixotropic compositions based on phenol-aldehyde **resole** resins for in-mold coatings for phenolic laminates
 AB Compns. that provide hard, defect-free, coatable surfaces on laminates of glass fiber-reinforced phenol-aldehyde resins contain an acid-hardenable phenol-aldehyde **resole** resin, highly dispersed hydrophobic amorphous silica, and a viscosity modifier, with Brookfield spindle-4 viscosity 40-50 and 14-18 P at 5 and 50 rpm, resp. Optionally, the compns. contain addnl. inorg. filler and exhibit spindle-7 viscosity 80-200 and 300-600 P at 50 and 5 rpm, resp. Thus, a compn. (spindle-7 viscosity 440 and 130 P at 5 and 50 rpm) contg. 1.6:1 HCHO-phenol **resole** resin (I) 100, glass spheres (av. diam. 15 .mu.m) 110, Aerosil R805 (av. particle diam. 12 nm) 2, and viscosity modifier 2 parts was mixed with 2.5% Phencat 15 catalyst, brushed at 0.3-0.4-mm thick on a mold surface, heated 20 min at 60.degree., laid-up with 3 layers of chopped glass strand mat and a layer of I contg. 6% Phencat 10 catalyst at I-glass ratio 2:1, and cured 3 h at 60.degree. in the mold and 4 h at 60.degree. outside the mold.

AN 1992:257524 CAPLUS
 DN 116:257524
 TI Thixotropic compositions based on phenol-aldehyde **resole** resins for in-mold coatings for phenolic laminates
 IN Francis, Robert Stradling; Orpin, Murray Roy
 PA BP Chemicals Ltd., UK
 SO Eur. Pat. Appl., 8 pp.
 CODEN: EPXXDW

DT Patent
 LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|------------|------|----------|-----------------|----------|
| PI | EP 476829 | A2 | 19920325 | EP 1991-307434 | 19910813 |
| | EP 476829 | A3 | 19921125 | | |

| | | | | |
|---|----|----------|-----------------|----------|
| EP 476829 | B1 | 19960925 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE | | | | |
| AT 143399 | E | 19961015 | AT 1991-307434 | 19910813 |
| ES 2091295 | T3 | 19961101 | ES 1991-307434 | 19910813 |
| ZA 9106624 | A | 19930428 | ZA 1991-6624 | 19910821 |
| CA 2049823 | AA | 19920302 | CA 1991-2049823 | 19910826 |
| JP 04234451 | A2 | 19920824 | JP 1991-218372 | 19910829 |
| AU 9183506 | A1 | 19920305 | AU 1991-83506 | 19910830 |
| AU 641542 | B2 | 19930923 | | |
| US 5334630 | A | 19940802 | US 1991-752730 | 19910830 |
| PRAI GB 1990-19143 | | 19900901 | | |

L4 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Phenolic resin binders for foundry and refractory uses
 AB Alkoxy-modified phenolic **resole** (I) resins are suitable for binders having good storage properties. I resin contains .gtoreq.1 alkoxyethylene group for each 20 phenolic nuclei joined mainly by ortho-ortho benzylic ether bridges. The resins are prep'd. by reacting phenol, aliph. alc., and an aldehyde (esp. aq. formaldehyde) with heating in the presence of a divalent metal ion catalyst. Preferred mol ratio of **aldehyde to phenol** is (1.2-2.2):1. Acid-hardened resin is a suitable binder for foundry molds or ceramic refractory mixts. Thus, charge soln. contg. phenol 3891, aq. 50% formaldehyde 3603, MeOH 639, and aq. 25% Zn acetate 311.4 g was refluxed 3 h to reach free formaldehyde 6-8%. Excess water was removed by heating at 50-90.degree.. After MeOH 639 g was added again, the soln. was refluxed 7 h for 1.2% free formaldehyde. Resulting I resin was mixed with 200 g MeOH and 12 g .gamma.-aminopropyltriethoxy silane. Dried SiO₂ sand 2500 g was mixed at 38.degree. with 10 g acid catalyst (80% benzenesulfonic acid and .apprx.1% H₂SO₄ in MeOH) for 1 min, and then with 27.5 g resin product for 1 min. The sand mixt. held for 1-10 min was pressed into tensile specimens, and showed tensile strength 7.6-34 kg/cm² (decreasing after longer holding time). Conventional **resole** resin lost strength when the mixt. was held for >5 min. The I resin product at 31.degree. could be stored for 1 yr without showing an excessive increase in viscosity.

AN 1986:447382 CAPLUS

DN 105:47382

TI Phenolic resin binders for foundry and refractory uses

IN Iyer, Raja; Shah, Rasik C.; Laitar, Robert

PA Acme Resin Corp., USA

SO Eur. Pat. Appl., 31 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-------------------------------|------|----------|-----------------|----------|
| PI | ----- | ---- | ----- | ----- | ----- |
| PI | EP 179360 | A2 | 19860430 | EP 1985-112854 | 19851010 |
| | EP 179360 | A3 | 19870408 | | |
| | EP 179360 | B1 | 19910102 | | |
| | R: BE, DE, FR, GB, IT, NL, SE | | | | |
| | US 4657950 | A | 19870414 | US 1984-660169 | 19841012 |
| | IN 166174 | A | 19900324 | IN 1985-MA709 | 19850910 |
| | BR 8505018 | A | 19860729 | BR 1985-5018 | 19851009 |
| | CA 1251883 | A1 | 19890328 | CA 1985-492606 | 19851009 |
| | AU 8548483 | A1 | 19860417 | AU 1985-48483 | 19851010 |
| | AU 583305 | B2 | 19890427 | | |
| | JP 61097314 | A2 | 19860515 | JP 1985-225001 | 19851011 |
| | ES 547786 | A1 | 19870401 | ES 1985-547786 | 19851011 |
| | US 4848442 | A | 19890718 | US 1987-106024 | 19871008 |
| PRAI | US 1984-660169 | | 19841012 | | |
| | US 1985-742688 | | 19850610 | | |
| | US 1987-15497 | | 19870206 | | |

L4 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Resin compositions
 AB A molding compn., with reduced post-curing time but no loss of thermal stability, is prep'd. from .gtoreq.50% aralkylene phenolic resin by addn. of .ltoreq.50% aldehyde-phenol resin. Thus, a mixt. of PhOH 752, 40% formalin 480, and oxalic acid 11.25 g was refluxed 2 h and cooled to give a novolac resin (I) [9003-35-4] which (40 g) was mixed with phenol-p-xylene dimethyl ether copolymer [26834-02-6] 120, asbestos flour 340, hexamine 20, Ca stearate 8, MgO 5, and Zn borate 8 g, processed 10 min at 120.degree., and cooled, giving a molding compn. The compn. was molded 10 min at 165.degree. and 100 psi and post cured at 140-250.degree.. The min. postcuring time was 6 h compared with 20 h for a control when I was omitted.
 AN 1977:424213 CAPLUS
 DN 87:24213
 TI Resin compositions
 IN Edwards, Alfred Gerald; Harris, Glyn Islwyn
 PA Albright and Wilson Ltd., UK
 SO U.S., 7 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|--------------------------|------|----------------------|---------------------------------|----------------------|
| PI | US 4020035
GB 1484621 | A | 19770426
19770901 | US 1974-506242
GB 1974-40071 | 19740916
19740913 |
| PRAI | CA 1973-181229 | | 19730917 | | |

L4 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Adhesive for reinforcing rubber
 AB Adhesive compns. contain a copolymer formed from H₂C:CH₂CO₂Me, a monoester of monoethylenically unsatd. dicarboxylic acid and a hydroxyalke ne with a blend of a HCHO (I)-phenol resin and a rubber latex, are useful for bonding reinforcing elements to rubbery compns., to form articles and laminates. Thus 11.6 g resorcinol and 12.8 g I dissolved in 311.6 g H₂O to give a resole soln. A mixt. of 75 parts butadiene (II) and 25 parts 2-vinylpyridine (IIa) was emulsified in 157 parts of an aq. soln. contg. Na oleate 4, NaOH 0.5, I-Na naphthalenesulfonate condensation product 1, K₂S₂O₈ 1, and K₃Fe(CN)₆ 0.1 part; then 0.5 part lauryl mercaptan was added and the emulsion heated 20 hr in a sealed vessel at 40.degree.. The resulting smooth latex was treated with an antioxidant contg. 2 parts of a 55:45 N-phenyl-.alpha.-naphthylamine-Ph₂NH mixt. dispersed in H₂O (4 0% solids content). Similarly a 40% solids 75:25 II-styrene copolymer (III) was prep'd. After 10.0 g of NaOH was added to the resole soln. to catalyze resin formation, 125 g of the II-IIa latex and 125 g III were added to the soln., and the resulting blend was aged 12-24 hr, then dild. to .apprx.20% solids. The dicarboxylic monoester-contg. copolymer was prep'd. by a 2-charge polymn. method with a redox system and a nonionic emulsifier in the following amts. (amts. in g for both charges given): H₂O, 3000, 1500; Na lauryl sulfate, 20, 10; octylphenoxy-polyethoxyethanol, 400, 135; H₂C:CH₂CO₂Me. 2800, 2800; hydroxypropyl methacrylate, 750, 750; Bu H itaconate (IV), 185, 185; NaI sulfoxylate, 100, 60; K₂S₂O₈, 100, 35; FeSO₄.7H₂O, 0.5, -; tert-BuOOH, 80, 30. After the reactor was flushed with N, charge 1 was introduced and the polymn. medium stirred until it cooled to .apprx.35.degree., then charge 2 ingredients were added, and the polymn. medium was again stirred until the reaction wa s complete. The final product was then cooled and salted, with a latex of dicarboxylic acid monoester contg. polymer, which was dild. to .apprx.20% solids. The emulsion copolymer was mixed with the aldehyde-phenol -rubber latex prep'd. in the wt. ratio of 5:95; then was adjusted to pH .apprx.6 with NH₄OH. Some of the carboxylic functionality was neutralized to the salt form, but the degree of neutralization was min. A

conventional nylon tire cord was passed under slight tension through an adhesive compn. at 6 ft/min and dried 1.5 min under 5 lb tension in air at .apprx.215.degree.. The treated nylon cord was used to reinforce a conventional IIII stock; the force necessary to remove the cord was .apprx.27.5 lb. A similar pull test was used on a laminate contg. a cord treated in the same way, with only the **aldehyde-phenol**-rubber latex; only .apprx.22.0 lb tensile force was necessary to pull the cord from the rubber. The procedure was repeated substituting 165 g laruy H itaconate for 185 g IV in each charge; when applied to a Dacron tire cord, the force necessary to pull the ends of the cord from the rubber was .apprx.1.5 lb while a control required only .apprx.1.0 lb. The same mixt. also gave good results when applied to a rayon tire cord, the procedure was again repeated replacing the 185 g IV with 75 g Me H itaconate, and using a 15:85 emulsion copolymer-blend ratio. When applied to a nylon tire cord it required 29.5 lb, in contrast with the 22.0 lb tensile force needed to sep. the control cord.

AN 1970:56512 CAPLUS

DN 72:56512

TI Adhesive for reinforcing rubber

IN Schmitt, Theophil D.

PA Rohm and Haas Co.

SO U.S., 5 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | US 3483075 | A | 19691209 | US 1966-589805 | 19661027 |
| PRAI | US 1966-589805 | | 19661027 | | |

L4 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

TI Resins from phenol-aldehyde condensation products and poly(hydroxy ethers)

AB Phenolic coatings are given increased impact strength by blending a **resole** phenol-aldehyde condensation product with 10-40%

2,2-bis[p-(2,3-epoxypropoxy)phenyl]propane (I). Thus, a mixt. of 4,4'-isopropylidenediphenol 14.5, epichlorohydrin 46.8, ETOH 96, BuOH 10, NaOH 22.6, and water 70 parts was stirred at room temp. for 16 hrs. and heated 1 hr. at 80.degree., before 60 parts 7:3 PhMe-BuOH mixt. (II) was added. Heating was continued 2 hrs. at 80.degree., 50 parts II and 4.5 parts PhOH were added, and the mixt. was refluxed for 2.5 hrs. at 80.degree.. The mixt. was cooled, 200 parts II and 100 parts H₂O were added, and the mixt. was allowed to settle for 10 min. The lower brine phase was sep'd. and the upper polymer phase was H₂O-washed, and neutralized 1 hr. with aq. (pH 2) H₃PO₄. The upper polymer phase was sep'd., washed with 200 parts 4.5% aq. BuOH, coagulated in iso-PrOH, filtered, and dried to yield I. Steel panels were dip-coated in a soln. contg. 3:1 PhOH-cresol-HCHO condensation product 80, I 20, and 21:40:40 PhMe-MeCOEt-ethylene glycol monoethyl ether acetate 150 parts. The coating (0.5-1 mil) after curing for 15 min. at 400.degree.F. had 160 in.-lb. Gardner impact strength, good adhesion, good flexibility by 1/8 in. mandrel bend test, and was unaffected by 2 weeks immersion in PhMe. Similar coatings were prep'd. from I and a 1:3 mixt. of PhOH and HCHO-I condensate. The use of poly(hydroxy ethers) prep'd. from a phenol and 4-vinylcyclohexene or dipentene is claimed.

AN 1968:115386 CAPLUS

DN 68:115386

TI Resins from phenol-aldehyde condensation products and poly(hydroxy ethers)

PA Union Carbide Corp.

SO Brit., 8 pp.

CODEN: BRXXAA

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----------|--|------|----------|-----------------|------|
| PI | GB 1108790
DE 1494535
US 3409581 | | 19680403 | DE
US | |
| PRAI | US | | 19640629 | | |
| L4 | ANSWER 7 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN | | | | |
| TI | Combustion-resistant phenolic forms | | | | |
| AB | <p>Low-d., multicellular foam structures of thermal set phenol-aldehyde condensates are prep'd. by admixing with the liq. phenol-aldehyde resole of viscosity 200-300,000 cp. at 25.degree. an Al halide contg. chloride or bromide or both in an amt. of .gtoreq.5 parts/100 resole, foaming the resulting mixt., and curing the resole to a stable cured foam. Mixts. of 3 different resins were used, including a NaOH catalyzed phenol-HCHO resole resin of viscosity 600-1000 and contg. 0.8% water, a resole (I) of viscosity 3000 cp. and water content 7.0%, and a resole of viscosity 10,000 cp. and water content 8%. A typical foam was prep'd. from I 100, AlCl₃ 7, surfactant 3, and Ucon 113 (CFC₁₂CF₂Cl) 10 parts. The foam obtained had a d. of 1.97, required 10.2 min. to reach 500.degree.F. at the surface, showed no punking, i.e. continued glowing and combustion after removal of the flame, and had compressive strength 13.1 psi. Catalysts similarly used were AlBr₃, TiCl₄, FeCl₃, AlCl₃.6H₂O, and HCl. Foams were also prep'd. using mixts. of the epoxy resins and resole resins according to the formulation epoxy resin (diglycidyl ether bisphenol A of epoxy equiv. 190 and viscosity 7000-9000 cp.) 7.5, resole resin of 3000 cp. 100, surfactant L-530 3.3, Ucon 113 11, and AlCl₃ 7.5 parts to give a foam of 1.1 lb./ft.³ d., no punking, and requiring 16 min. to reach 500.degree.F.</p> | | | | |
| AN | 1968:22580 CAPLUS | | | | |
| DN | 68:22580 | | | | |
| TI | Combustion-resistant phenolic forms | | | | |
| PA | Union Carbide Corp. | | | | |
| SO | Brit., 12 pp. | | | | |
| | CODEN: BRXXAA | | | | |
| DT | Patent | | | | |
| LA | English | | | | |
| FAN.CNT 1 | | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
| PI | GB 1088056 | | 19671018 | | |
| PRAI | US | | 19631010 | | |
| L4 | ANSWER 8 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN | | | | |
| TI | Coatings for rubber articles | | | | |
| AB | <p>Vulcanized rubber or rubberized articles are coated by depositing on their surface, by evapn. from a volatile medium, a coherent film from a blended compn. consisting essentially of a phenol-aldehyde resin and a vinyl resin that are at least partly compatible with one another. The phenol-aldehyde resin employed is preferably a resole derived from a phenol having 3 or more reactive positions and HCHO, and a thermal treatment is applied, after the coating has been air-dried, that is adapted to harden the resole.</p> | | | | |
| AN | 1944:36475 CAPLUS | | | | |
| DN | 38:36475 | | | | |
| OREF | 38:5434b-c | | | | |
| TI | Coatings for rubber articles | | | | |
| PA | E. I. du Pont de Nemours & Co.; Imperial Chemical Industries Ltd. | | | | |
| DT | Patent | | | | |
| LA | Unavailable | | | | |
| FAN.CNT 1 | | | | | |
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |

PI GB 553437 19430521 GB

L4 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN
TI Artificial resins for lacquers, etc.
AB A transparent compn. is prep'd. comprising an oil-modified polyhydric alc.-"polybasic" acid resin and phenol-aldehyde **resole** substantially freed from unconverted **phenol** by extn. with a **phenol** solvent such as water in which the resin itself is insol.
AN 1935:1758 CAPLUS
DN 29:1758
OREF 29:254a-b
TI Artificial resins for lacquers, etc.
IN Strafford, Norman; Walker, Eric E.
PA Imperial Chemical Industries Ltd.
DT Patent
LA Unavailable
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|-------|----------|-----------------|-------|
| ----- | ----- | ----- | ----- | ----- |
| PI US 1977652 | | 19341023 | US | |

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(FILE 'HOME' ENTERED AT 08:48:28 ON 03 NOV 2004)

FILE 'CAPLUS' ENTERED AT 08:48:38 ON 03 NOV 2004
L1 159 S (RESOLE RESIN)
L2 836 S (ALDEHYDE (10W) (PHENOL OR BISPHENOL))
L3 3 S L1 AND L2
L4 9 S L2 AND RESOLE

=> s l1 and (fuel cell)
341139 FUEL
1837086 CELL
42918 FUEL CELL
(FUEL (W) CELL)
L5 1 L1 AND (FUEL CELL)

=> s l1 and electrode
415757 ELECTRODE
L6 4 L1 AND ELECTRODE

=> d 15 ti

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN
TI Method for forming a **fuel cell** electrode using a **resole** binder

=> d 16 1-4 ti, ab

L6 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
TI Conductive polymer, conductive polymer compositions and their use
AB The invention provides an **electrode**, electrolyte and/or a separator plate comprising a conductive material-doped ester-cured alkaline phenolic **resole** **resin** containing conducting alkaline salts.

L6 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
TI Method for forming a fuel cell **electrode** using a **resole** binder
AB A method for forming an **electrode** for a fuel cell is disclosed. The method comprises combining an elec. conductive material (e.g., graphite) and a solid grindable **resole** **resin** binder,

the binder being essentially free of nitrogen and nitrogen-contg. compds., and consolidating the elec. conductive material and the binder to form the fuel cell **electrode**. The use of a solid, grindable, single stage, nitrogen-free **resole resin** binder serves to increase the operating life of the **electrode**. One example binder comprises the reaction product of bisphenol A and a molar excess of an aldehyde, such as formaldehyde.

L6 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
TI Preparation of reticulated vitrified carbon compositions containing metal and/or metal salts for electrodes
AB The compns. contain dispersed particles of Cu, Sn, Zn, Pb, Ni, and/or Fe, or alloys. Preferably, the content of the metal/alloy particles is 30-130 mg/cm³; the particles are spherical in shape with particle size <100 .mu.m; and some or all of the metal or alloy particles have been converted into salts or mixts. of salts, which are electro-catalytically active and chalcogenides. The process comprises: prepg. a compn. comprising a polymer or .gtoreq.1 polymer precursors which will form vitrified C on pyrolysis, and metal, metal alloy, or metal mixt.; heating the compn. to a temp. .gtoreq. that at which the polymer will pyrolyze (if a polymer is used), or curing the precursor (if a polymer precursor is used) to form a polymer and heat the resultant compn., where the polymer is a furan polymer; the precursor is furfuryl alc., furfural epoxy resin, novolac resin, or **resole resin**; hexamethylenetetramine is added as curing agent; and suitable reagents (polysulfide comprising a metal hydroxide, a metal sulfide and sulfur) are used to effect conversion of the metal or metal alloy into salts.

L6 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
TI Resin binder system for carbon anodes, cathodes, and electrodes
AB Phenol-formaldehyde resins having a low content of volatiles are used as binders in the manuf. of baked electrodes from carbon or graphite. The preferred binder system consists of: powd. novolak resin having m.p. >110.degree. and volatiles <4% (including free PhOH vapor), and/or liq. **resole resin** of viscosity 50-450 cP and free PhOH content of 10-25%, optionally with hexamethylenetetramine hardener and acid accelerators. A mixt. of granular and powd. coke with the resin binder is shaped into electrodes and heated for hardening, carbonizing, and optionally graphitizing. The electrodes are suitable for electrowinning of Al as well as for metallurgical applications. Thus, a blend of granular and powd. coke was mixed with liq. **resole resin** having viscosity 150-400 cP and 65-70% solids. The mixt. contg. 7.8% binder solids was cold pressed into tensile specimens 0.5-in. thick and baked for hardening. Av. tensile strength was 301 psi, comparable to that obtained with 15% of com. coal-tar pitch binder with a similar coking value of 50-60%.

=> d 16 4 ti, bib

L6 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
TI Resin binder system for carbon anodes, cathodes, and electrodes
AN 1989:11546 CAPLUS
DN 110:11546
TI Resin binder system for carbon anodes, cathodes, and electrodes
IN Chandramouli, Pitchaiya; Letizia, Benedict
PA Borden, Inc., USA
SO U.S., 13 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|-------|-----------------|-------|
| ----- | ---- | ----- | ----- | ----- |

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|------|----------------|----|----------|----------------|----------|
| PI | US 4775455 | A | 19881004 | US 1986-848468 | 19860407 |
| | CA 1309542 | A1 | 19921027 | CA 1987-528163 | 19870126 |
| | IN 168382 | A | 19910323 | IN 1987-CA264 | 19870401 |
| | AU 8771002 | A1 | 19871008 | AU 1987-71002 | 19870402 |
| | AU 592170 | B2 | 19900104 | | |
| | IN 168677 | A | 19910518 | IN 1989-CA420 | 19890601 |
| | IN 168678 | A | 19910518 | IN 1989-CA421 | 19890601 |
| | IN 168679 | A | 19910518 | IN 1989-CA422 | 19890601 |
| | IN 168680 | A | 19910518 | IN 1989-CA425 | 19890601 |
| PRAI | US 1986-848468 | | 19860407 | | |
| | IN 1987-CA264 | | 19870401 | | |

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(FILE 'HOME' ENTERED AT 08:48:28 ON 03 NOV 2004)

FILE 'CAPLUS' ENTERED AT 08:48:38 ON 03 NOV 2004

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|----|--|
| L1 | 159 S (RESOLE RESIN) |
| L2 | 836 S (ALDEHYDE (10W) (PHENOL OR BISPHENOL)) |
| L3 | 3 S L1 AND L2 |
| L4 | 9 S L2 AND RESOLE |
| L5 | 1 S L1 AND (FUEL CELL) |
| L6 | 4 S L1 AND ELECTRODE |

=> s (solid (5w) resole)

934371 SOLID
604 RESOLE

L7 7 (SOLID (5W) RESOLE)

=> d 17 1-7 ti, ab, bib

L7 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

TI Method for forming a fuel cell electrode using a resole binder

AB A method for forming an electrode for a fuel cell is disclosed. The method comprises combining an elec. conductive material (e.g., graphite) and a solid grindable resole resin binder, the binder being essentially free of nitrogen and nitrogen-contg. compds., and consolidating the elec. conductive material and the binder to form the fuel cell electrode. The use of a solid, grindable, single stage, nitrogen-free resole resin binder serves to increase the operating life of the electrode. One example binder comprises the reaction product of bisphenol A and a molar excess of an aldehyde, such as formaldehyde.

AN 2004:252164 CAPLUS

DN 140:273597

TI Method for forming a fuel cell electrode using a resole binder

IN Waitkus, Phillip A.; Lepeska, Bohumir B.; Morrison, Theodore N.; Sciarra, Paschal A.

PA USA

SO U.S. Pat. Appl. Publ., 5 pp.
CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-----------------|------|----------|-----------------|----------|
| PI | US 2004058801 | A1 | 20040325 | US 2003-615713 | 20030709 |
| PRAI | US 2002-394681P | P | 20020709 | | |

L7 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

TI Mixed polymeric MDI/resol resin binders for the production of wood composite products

AB This invention relates to a process for the prodn. of composite wood

products. This process comprises: (a) applying a binder compn. to wood particles, and (b) molding or compressing the wood particles treated with the binder to form a composite wood product. Suitable binder compns. comprise a polymethylene poly(Ph isocyanate) and a solid resole resin.

AN 2000:421233 CAPLUS
 DN 133:60270
 TI Mixed polymeric MDI/resol resin binders for the production of wood composite products
 IN Rostauser, James W.; Detlefson, William D.
 PA Bayer Corporation, USA
 SO PCT Int. Appl., 36 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|----------|
| PI | WO 2000036019 | A1 | 20000622 | WO 1999-US29298 | 19991210 |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | US 6214265 | B1 | 20010410 | US 1998-213595 | 19981217 |
| | CA 2355055 | AA | 20000622 | CA 1999-2355055 | 19991210 |
| | BR 9916163 | A | 20010904 | BR 1999-16163 | 19991210 |
| | EP 1155087 | A1 | 20011121 | EP 1999-966106 | 19991210 |
| | EP 1155087 | B1 | 20040317 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | AU 752006 | B2 | 20020905 | AU 2000-21731 | 19991210 |
| | JP 2002532292 | T2 | 20021002 | JP 2000-588273 | 19991210 |
| | AT 262008 | E | 20040415 | AT 1999-966106 | 19991210 |
| | US 2001017427 | A1 | 20010830 | US 2001-773796 | 20010201 |
| | US 6641761 | B2 | 20031104 | | |
| PRAI | US 1998-213595 | A | 19981217 | | |
| | WO 1999-US29298 | W | 19991210 | | |

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Adhesion promoter composition and products
 AB An adhesion promoter compn. and method for enhancing adhesion between a polysulfide polymer sealant and a thermoplastic substrate (i.e., nylon, PVC, polypropylene) is provided having a solid resole phenolic resin (most preferably 10-50%, unmodified phenol-formaldehyde copolymer) and a compatible org. solvent (i.e., alc. or ketone), optionally contg. a chlorinated polyolefin (.ltoreq. 10%).

AN 1996:350591 CAPLUS

DN 125:60519

TI Adhesion promoter composition and products

IN Scholl, Steven L.

PA Fiber Resin Corp., USA

SO U.S., 7 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

PI US 5516843 A 19960514 US 1994-251714 19940531
 PRAI US 1994-251714 19940531

L7 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
 TI The chemistry of phenol-formaldehyde resin vulcanization of EPDM. Part I.
 Evidence for methylene crosslinks
 AB The cure reaction mechanism and crosslink structure of EPDM, contain
 2-ethylidene norbornene (ENB) as the third monomer, cured by
 phenol-formaldehyde resins are studied. 2-Ethylidene norbornane (ENBH) is
 used as a low mol. wt. model for EPDM. Reaction of ENBH and a resole
 resulted in scission of the dimethylene ether bridges, i.e. in degrdn. of
 the resole into mono-, bis- and terisoctylphenol units. They are
 consequently converted into products, and link two ENBH mols. The
 solid resole is a technol. soln. for storing phenol in
 combination with formaldehyde. 2-Hydroxymethylphenol (HMP) is used as a
 low mol. wt. model for the resole. At low temps. and/or short reaction
 times HMP oligomers and HMP oligomers linked by ENBH mol. are formed,
 which are converted into ENBH/HMP (1:1) condensation products. The
 reaction products of ENBH with both resole and HMP contain
 methylene-linked structures, as demonstrated by the formation of
 monisoctylphenol crosslinks and the presence of residual unsatn. and
 hydroxyl groups.

AN 1996:98889 CAPLUS
 DN 124:148446
 TI The chemistry of phenol-formaldehyde resin vulcanization of EPDM. Part I.
 Evidence for methylene crosslinks
 AU van Duin, Martin; Souphanthong, Aniko
 CS DSM Res., Neth.
 SO Rubber Chemistry and Technology (1995), 68(5), 717-27
 CODEN: RCTEA4; ISSN: 0035-9475
 PB American Chemical Society, Rubber Division
 DT Journal
 LA English

L7 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Phenolic molding compositions
 AB The title compns. with good thermal resistance comprise a mixt. of 3-7
 parts solid phenolic resole resin contg. .ltoreq.7%
 free PhOH, having no.-av. mol wt. 800-1200, and having 20-50:10-20:40-60
 mol ratio of methylene-methylol-dimethylene ether group and 3-7 parts
 similar phenolic resin having mol. wt. 600-1000 and 30-50:30-70:0-20 mol
 ratio of methylene-methylol-dimethylene ether group contg. 100-250 phr
 glass fibers. A mixt. of dimethylene ether-based phenolic resin (I)
 having free PhOH 4%, mol. wt. 950, and the mol. ratio of above groups
 40:12:48 10, methylol-based phenolic resin having free PhOH 6.1%, mol. wt.
 1000, and the mol ratio of above groups 50:30:20 20, glass fiber 50, clay
 15, and additives 5 parts was injection-molded at 120.degree. to give a
 sample having thermal distortion temp. <250.degree., vs. 240.degree. for
 the compon. contg. I only.

AN 1987:408309 CAPLUS
 DN 107:8309
 TI Phenolic molding compositions
 IN Oi, Keiji; Yamada, Masae
 PA Sumitomo Bakelite Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|-------------|------|----------|-----------------|----------|
| PI | JP 62034948 | A2 | 19870214 | JP 1985-173213 | 19850808 |
| | JP 05074619 | B4 | 19931018 | | |

PRAI JP 1985-173213

19850808

L7 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Phenolic resoles
 AB Solid resoles useful as binders were prep'd. and had N-binding index 0.6-0.9, methylene-binding index 0.18-0.25, methylol group index 0.4-0.7, softening temp. 75-90.degree., gel time 40-120 s, and mol. wt. 300-450. For example, PhOH 940, 42% aq. HCHO 1214, and 25% aq. NH₃ 43 g were heated at 60.degree. for 30 min, treated with 1.0 g CaO for 1.5 h and then 26 g hexamethylenetetramine (I) for 1 h, further treated with 58 g I, and freed from water at .1toreq.95.degree. to give a **solid resole** (II) [9003-35-4] with methylol group index 0.42, methylene-binding index 0.42, N-binding index 0.63, softening temp. 80.degree., gel time (150.degree.) 80 s, and mol. wt. 368. A molded specimen from II 50, wood flour 46, MgO 1.1, and Zn stearate 0.5 part had sp. gr. 1.35, bending strength 9.0 kg/mm², impact strength 3.0 kg-cm/cm, insulation resistance 1010 .OMEGA., and breakdown 12 kV/mm. A hardboard from 100 parts pulp and 20 parts II had sp. gr. 0.8, bending strength 450 kg/cm², and water absorption 30%.

AN 1981:16550 CAPLUS
 DN 94:16550
 TI Phenolic resoles
 PA Gunei Chemical Industry Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-------------------|------|----------|-----------------|----------|
| PI JP 55106215 | A2 | 19800814 | JP 1979-7969 | 19790126 |
| PRAI JP 1979-7969 | | 19790126 | | |

L7 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Phenolic resin and battery separator impregnated with it
 AB The resistance to oxidn., acid degrdn., and migration of phenolic resin-impregnated cellulosic battery separators was improved by addn. of polyols to the aq. phenolic formulations used for impregnation. A series of 40% solids water-dilutable resole compns. was prep'd. by condensing HCHO with PhOH in mole ratio 1.45-2.45:1 to give no. av. mol. wt. 150-240. The antimigratory agents ethylene glycol [107-21-1], glycerol [56-81-5], and sorbitol [50-70-4] were added at 16, 8, and 8 parts/100 parts **solid resole** resp. and the solns. were used to impregnate cellulosic sheets which were squeezed and dried 10 min at 180.degree. to give 40 wt.% pick up. The oxidative wt. loss and migration rate were both lower in the presence of the polyols than without additives. Using resorcinol or urea as additives increased the degree of migration and decreased oxidn. resistance resp.

AN 1976:75307 CAPLUS
 DN 84:75307
 TI Phenolic resin and battery separator impregnated with it
 IN Jones, Robert T.
 PA Monsanto Co., USA
 SO U.S., 5 pp.
 CODEN: USXXAM

DT Patent
 LA English
 FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------|------|----------|-----------------|----------|
| PI US 3926679 | A | 19751216 | US 1974-432111 | 19740109 |
| PRAI US 1974-432111 | | 19740109 | | |

| | | |
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| => FIL STNGUIDE | | |
| COST IN U.S. DOLLARS | SINCE FILE
ENTRY | TOTAL
SESSION |
| FULL ESTIMATED COST | 85.40 | 85.61 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE
ENTRY | TOTAL
SESSION |
| CA SUBSCRIBER PRICE | -16.10 | -16.10 |

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AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Oct 29, 2004 (20041029/UP).



Enter a Chemical Name, CAS Number, Molecular Formula or Weight.

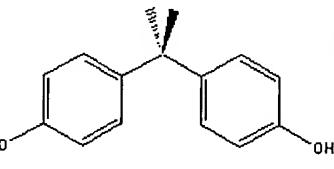
Use * for partial names (e.g. ben*).

Search here for free. For professional searching, use ChemINDEX.

 Search

Bisphenol A [80-05-7]

Synonyms: 2,2-Bis(4-Hydroxyphenyl)propane;
 2,2-Bis(4'-hydroxyphenyl)propane; 2,2-di(4-phenylol)propane;
 4,4'-dihydroxy-2,2-diphenylpropane;
 p,p'-dihydroxydiphenyldimethylmethane; 4,4'-dihydroxydiphenylpropane;
 4,4'-dimethylmethylenediphenol; 4,4'-bisphenol a;
 4,4[-Isopropylidenediphenol; p,p'-isopropylidenebisphenol;
 4,4'-ISOPROPYLIDENEDIPHENOL (BISPHENOL A);
 beta,beta-di-(p-hydroxyphenyl)propane; bis(4-hydroxyphenyl)
 dimethylmethane; bis(4-hydroxyphenyl)propane; DIAN; dimethyl
 bis(p-hydroxyphenyl)methane; dimethylmethylenep,p',-diphenol;
 Bisphenol A; Bisphenol A ; Phenol, 4,4'-(1-methylethylidene)bis-;

| | |
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ADD LINK |
| CAS RN Lookup
THE MERCK INDEX
NCI DATABASE | |

| | | | |
|------------------|---------------------------------------|--------------------|-------------------------|
| Formula | $C_{15}H_{16}O_2$ | Molecular Weight | 228.2902 |
| CAS RN | 80-05-7 | Melting Point (°C) | 150 - 159 |
| ACX Number | X1002023-2 | Boiling Point (°C) | 220 at 4 mm Hg |
| Density | | Vapor Density | |
| Refractive Index | | Vapor Pressure | |
| Evaporation Rate | | Water Solubility | <0.1 g/100 mL at 21.5 C |
| Flash Point (°C) | 227 | EPA Code | |
| DOT Number | | RTECS | SL6300000 |
| Comments | White to light brown flakes or powder | | |

More information about the chemical is available in these categories:

Health

MSDS

Physical Properties

Regulations

Trading